Name:

at1110paper_practice_test (v21)

1. Expand the following expression into standard form.

$$(4x + 9)(5x + 3)$$

$20x^2 + 12x + 45x + 27$

$20x^2 + 57x + 27$

2. Solve the equation.

$$(6x + 5)(9x - 7) = 0$$

$x = \frac{-5}{6}$ $x = \frac{7}{9}$

3. Expand the following expression into standard form.

$$(8x - 3)(8x + 3)$$

$64x^2 + 24x - 24x - 9$

$64x^2 - 9$

4. Expand the following expression into standard form.

$$(3x + 2)^2$$

$9x^2 + 6x + 6x + 4$

$9x^2 + 12x + 4$

5. Factor the expression.

$$x^2 - x - 12$$

$$(x+3)(x-4)$$

6. Factor the expression.

$$16x^2 - 9$$

$$(4x+3)(4x-3)$$

7. Solve the equation with factoring by grouping.

$$12x^2 + 18x + 10x + 15 \;=\; 0$$

$$(6x+5)(2x+3) = 0$$

$$x = \frac{-5}{6} \qquad x = \frac{-3}{2}$$

8. Solve the equation.

$$5x^2 - 15x + 16 \;=\; 3x^2 - 2x - 5$$

$$2x^2 - 13x + 21 = 0$$

$$(2x-7)(x-3) = 0$$

$$x = \frac{7}{2} \qquad x = 3$$